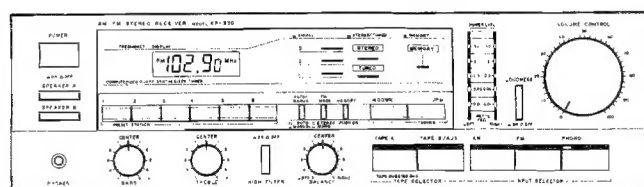


AM-FM stereo receiver

# KR-930

Instruction manual



This instruction manual can also be used for model KR-930B. The operations and specifications for both models KR-930B and KR-930 are the same.

## KENWOOD

PRINTED IN JAPAN B50-4778-00 (KPUMH, UE, X) (G)

5/353 67890N/354 D12345/454

1306

# Before applying power

## Important!

### U.S.A. and Canada

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only. These units are not equipped with an AC voltage selector switch and the discussion of such a switch that follows should be disregarded.

### All other countries

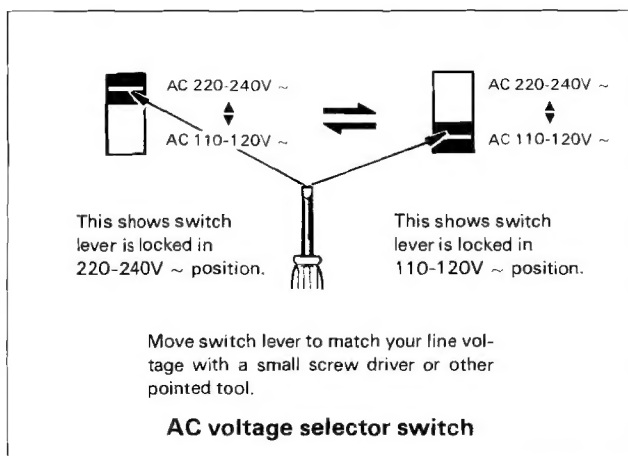
Units shipped to countries other than the U.S.A., Canada and U.K. are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

## AC voltage selection

This unit operates on 110 – 120 volts or 220 – 240 volts AC. The AC Voltage Selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

### Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC Voltage Selector switch.



## For United Kingdom

The mains plug must be removed from the wall socket prior to any internal examination.

## Important

The wires in this mains lead are coloured in accordance with the following code:

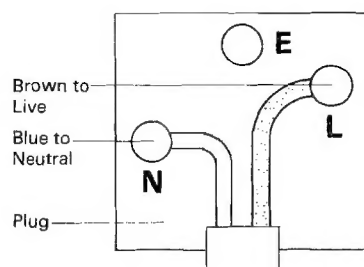
Blue..... Neutral  
Brown..... Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

### Wire colour

Blue..... N or Black  
Brown..... L or Red

### Plug terminal marking



### Notes:

- 1) If a 13-amp plug is used, this must be fitted with a 5-amp fuse.
- 2) If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

## WARNING:

TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

## Safety precautions (U.S.A. and Canada)

<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model KR-930 Serial number \_\_\_\_\_

## Unpacking

Unpack the unit carefully and make sure that all accessories and cables are put aside so they will not be lost.

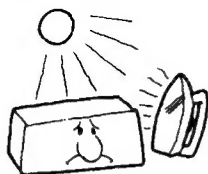
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

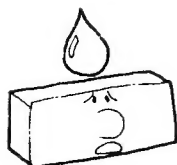
## Before operation

### Notes on installation

Do not place the unit in a place which is exposed to direct sunlight, near a heating appliance, etc.



Do not place a vase containing water, makeup, etc. on the unit. Do not use in a humid place.



To maintain good ventilation, do not put records or a tablecloth on the unit. Place the unit at least 10 cm away from the walls.



Choose a location that is relatively free from vibration or excessive dust.



### Safety precautions

Never remove the case. If the internal parts are touched, accidentally, a serious electric shock might occur.



Never touch internal parts.

If a metal object, such as a hair pin or a needle, comes into contact with the power socket on the rear panel, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



Touching the power plug when your hands are wet may result in a serious electric shock.



Never touch with wet hands.

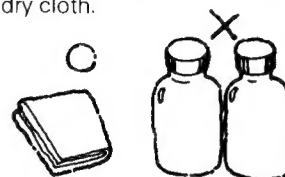
Never pull, bend or extend the power cord. This could damage the power cord, resulting in a broken cord or short-circuit.



Always grasp the plug.

### Cleaning

Do not use volatile solvents such as alcohol, paint thinner, gasoline, benzine, etc. to clean the cabinet. Use a silicone cloth or a clean dry cloth.



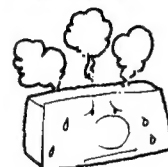
Silicone cloth

Thinner

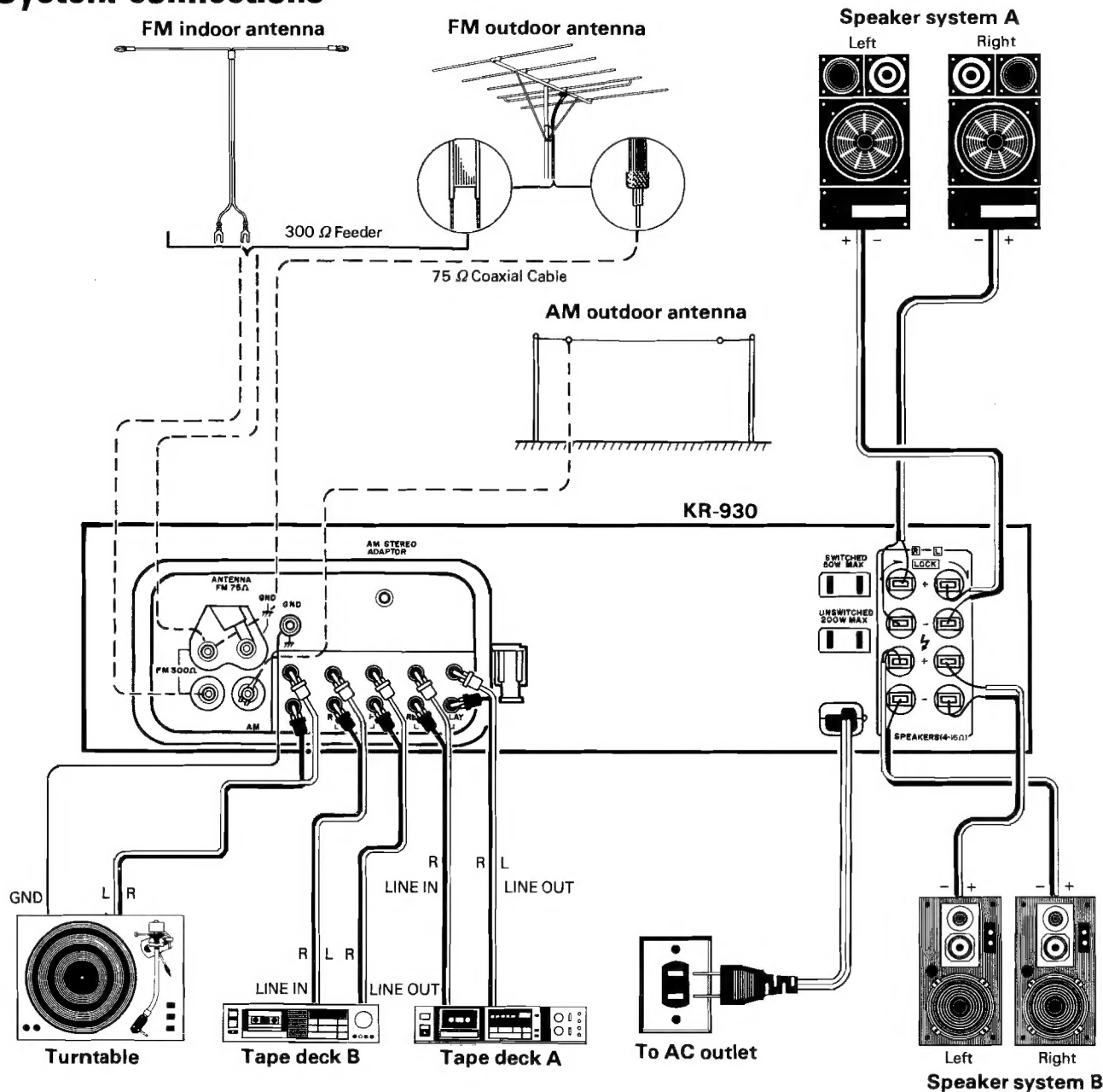
Benzine

### In case of abnormal smell

If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest Service Station.



# System connections



## Speakers

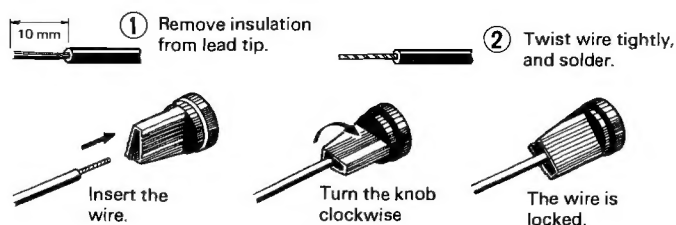
If only one set of speakers is to be connected, make connections to the terminals marked **SPEAKERS A**. Connect the speakers to the **L** and **R** terminals in accordance with the location selected for each speaker. To ensure correct speaker phasing, observe polarity marks; connect terminals marked (+) on the receiver to similarly-marked speaker terminals. Do the same for receiver and speaker terminals marked with a minus sign. Reversal of speaker leads will result in loss of bass tones and poor stereo separation.

If a second set of speakers is to be used make connections at the set of terminals, marked **B**.

It is recommended that the tips of the speaker leads be soldered, or the strands of individual leads be twisted together to eliminate any possibility of short-circuits forming in the speaker connecting network.

### Note:

If a single pair of speakers is to be used, each speaker must be rated at 4 ohms or more.



## Speaker lead connection

### Tape decks

If only one tape deck is to be connected to the system it is recommended that it be connected to the jacks marked **TAPE A**.

### Playback

Plug the left and right output cables of the tape deck into the **L** and **R** **TAPE A PLAY** jacks.

### Record

Plug the left and right input cables of the tape deck into the **L** and **R** **TAPE A REC** jacks.

## Second tape deck

Plug the input and output cables from the second tape deck into the REC and PLAY jacks marked TAPE B.

## Turntable

Your stereo turntable has two audio cables that are terminated with phono plugs. Plug the left channel plug into the **L** and the right channel plug into the **R** PHONO input jacks. If the turntable has a ground wire, connect it to this unit's GND terminal to avoid hum.

## Ground

For maximum safety and minimum interference connect the GND terminal to a good earth ground if practicable. A good earth ground is a cold water pipe or a metal stake driven into moist earth. However, never use a gas pipe for this purpose.

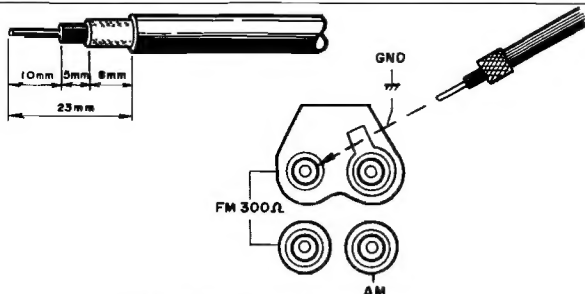
## FM antennas

### FM outdoor antenna

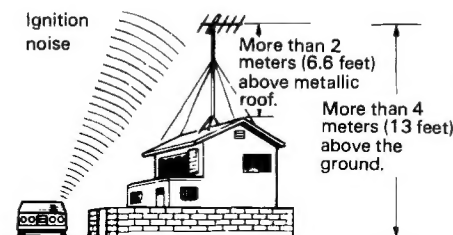
Consult with your dealer or service man about the best method of selecting and erecting an outdoor FM antenna. The choice of lead-in (feeder) wire is also important. The flat ribbon-shaped twin lead performs well electrically, is cheaper and is somewhat easier to handle in routing through windows and around rooms. Coaxial cable is more expensive, does a much better job of minimizing interference, is less prone to the effects of weather and close-by metal objects, and is nearly as good a signal conductor as the ribbon type wire. The latter is particularly true of foam-type coaxial cables. Coaxial cable is somewhat more difficult to install at the point where the cable enters the building. If coaxial cable is selected, make sure the antenna is designed to drive that type of cable.

#### Note:

Do not make connections to 300 $\Omega$  and 75 $\Omega$  antenna terminals simultaneously.



### 75 $\Omega$ Coaxial cable connection



### FM outdoor antenna installation

### FM indoor antenna

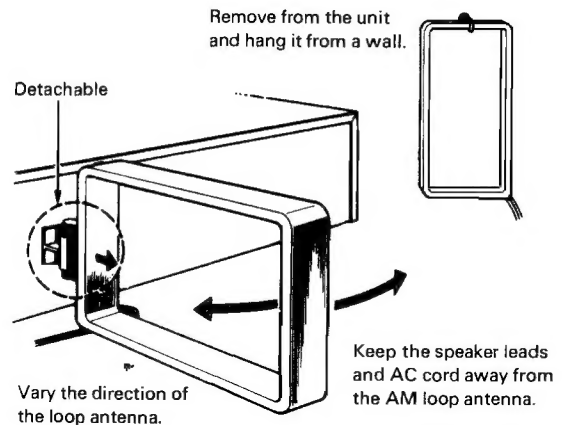
Connect the T-shaped indoor antenna (supplied) to the 300 $\Omega$  FM ANTENNA terminals. Spread the two arms that form the top of the "T" horizontally and hold them against convenient wall surfaces. Try several locations for best results on your favorite stations. Tape the antenna in place where the best compromise is found between listening results and appearance.

## AM antennas

### AM loop antenna

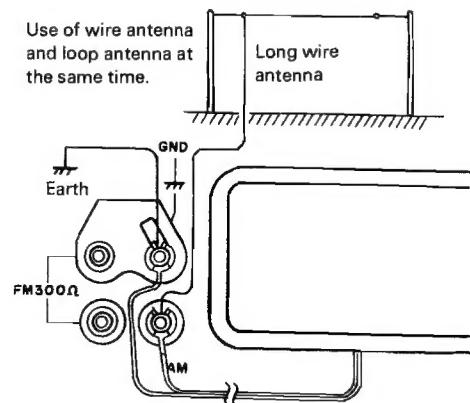
Tune to your favorite AM station and position the Loop antenna for best reception. Try other stations and find the position that gives best overall reception.

When this unit is mounted in a rack or placed on a shelf with insufficient space behind, remove the loop antenna and hang it from a wall in the direction which gives best reception as shown below. If the length of the lead wire is too short, add a lead wire of an appropriate length.



### AM outdoor antenna

In concrete buildings or at a great distance from the transmitter, it may be necessary to install an outdoor wire antenna. The end of this wire should be stripped of insulation and connected to the AM terminal as shown below.



### AC outlets (Except U.K.)

The AC outlets on the rear panel of the unit may be used to supply power to other components such as a turntable, tape deck, etc. Never connect any equipment here whose power consumption exceeds the capacity of each outlet.

1. **SWITCHED** outlet – This is 50 watts maximum in total capacity and is controlled by the POWER switch on the front panel.

#### Note:

The maximum capacitance of SWITCHED outlet of the unit shipped to countries other than the U.S.A. and Canada is 100 watts.

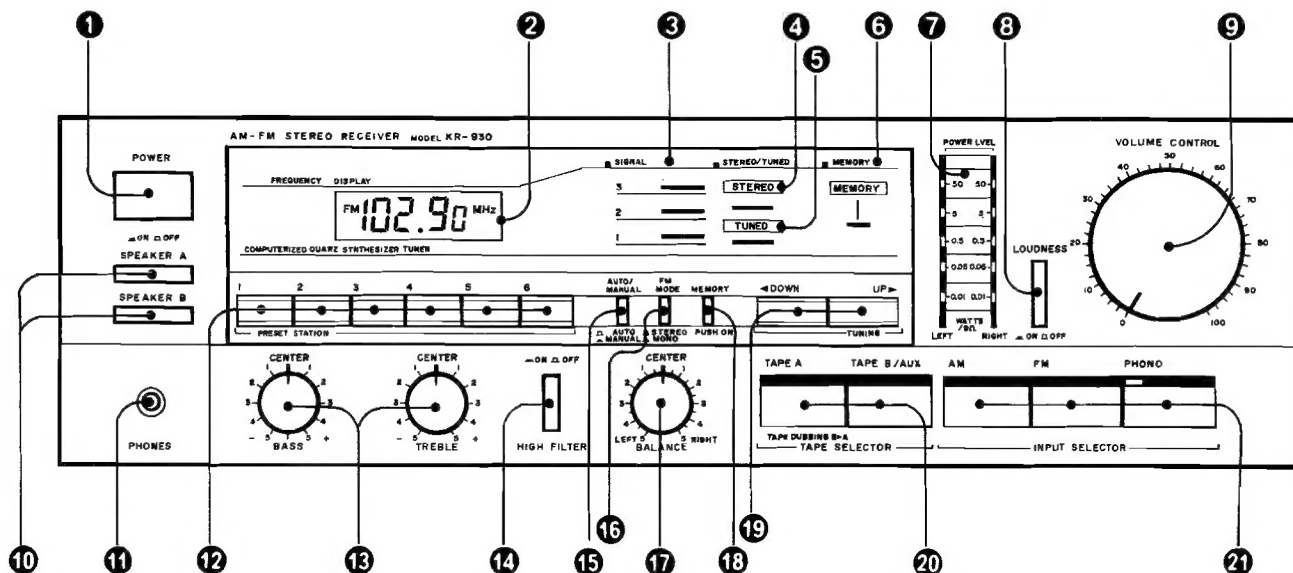
2. **UNSWITCHED** outlet – This is 200 watts maximum in capacity and power is available at all times.

### AM STEREO ADAPTOR

#### (For U.S.A. and Canada only)

To receive AM stereo broadcasts, connect an AM stereo adaptor (optionally available) into this jack.

# Controls, indicators and connectors



## 1 POWER switch

Push it to turn on power.  
Push it again to turn power off.

## 2 FREQUENCY DISPLAY

The frequency being received is indicated by this digital display.

## 3 SIGNAL indicator

The 3-LED indicator lights to show the strength of incoming signal. The number of LEDs that light is proportional to the signal strength. Tune so that most LEDs light.

## 4 STEREO indicator

Lights to show that the selected FM channel is transmitting in stereo and that the signal is strong enough to overcome muting.

## 5 TUNED indicator

Lights to show when an FM or AM station is received.

## 6 MEMORY indicator

When the MEMORY button is pressed, the indicator lights for approx. five seconds. Press the PRESET STATION button while this indicator lights to store the desired station.

## 7 POWER LEVEL indicator

The POWER LEVEL indicator is for both the left and right channels. The indicator is calibrated for an 8-ohm load. If 4-ohm speakers are used, multiply the reading by 2, for 16-ohm speakers, divide the reading by 2.

## 8 LOUDNESS switch

This switch boosts bass response to compensate for the lack of response in human hearing to those frequencies at low volume levels. This switch should be switched off when listening at normal and high levels.

## 9 VOLUME CONTROL

This control adjusts left and right-channel volume simultaneously. Set it for the desired listening level.

## 10 SPEAKER A and B switches

**A ON** – Activates speakers connected to the SPEAKERS A terminals on the rear panel.

**B ON** – Activates the speakers connected to the SPEAKERS B terminals on the rear panel.

**A, B ON** – Activates the speakers connected to the SPEAKERS A and B terminals simultaneously.

### Note:

When the SPEAKER A and B switches are used at the same time, the speakers connected to the SPEAKERS A and B terminals are connected in series. In this respect, whenever using the SPEAKER A and B switches at the same time, be sure that two pairs of speakers are connected to the terminals A and B, otherwise no sound is output.

## 11 PHONES jack

Stereo headphones are plugged into this jack. When SPEAKER A and B switches are set to OFF, only headphones can be heard.

## 12 PRESET STATION buttons

These buttons are used to preset the frequencies of broadcasting stations. Each button gives access to two memory sections, one for the FM band and the other for the AM band. As a result, one FM frequency and one AM frequency can be preset with one preset button. Selection between FM and AM is performed with the INPUT SELECTOR switches.

With this preset function, preset tuning is available without pressing the UP or DOWN switch.

### 13 BASS and TREBLE controls

Turn clockwise to increase bass or treble response, counter-clockwise to reduce bass or treble response. Response is flat when set to "CENTER".

### 14 HIGH FILTER switch

Set this switch to ON to reduce high frequency noise, such as tape hiss, record scratch, etc.

### 15 AUTO/MANUAL switch

**AUTO (unlatched position)** – This setting permits automatic AM/FM tuning by pushing the TUNING switch.

**MANUAL (latched position)** – This setting permits manual AM/FM tuning by pushing the TUNING switch.

### FM MODE switch

When the FM MODE switch is set to MONO, all FM broadcasts are received as monaural. When set to STEREO, stereo broadcasts are received as stereo, and monaural broadcasts are received as monaural. When the receiver is in the auto tuning mode, only those stations whose signal strength is sufficiently strong for noise-free reception are received. When reception of weaker stations is desired, using the MONO mode will pick up those stations too weak for stereo reception.

### 17 BALANCE control

This control permits balancing of left and right channels when imbalance exists in the sound source, or to correct for acoustic imbalance due to room conditions. When the right channel is weaker than the left channel, turn to the control to the right. When the left is weaker than the right, turn it to the left.

### 18 MEMORY button

The MEMORY button is used to store the frequency in the memory. Press the MEMORY button and a PRESET STATION button within about 5 seconds, and the displayed frequency is stored in the PRESET STATION button.

### 19 TUNING switches

**AUTO tuning** – With the AUTO/MANUAL Switch set to AUTO (unlatched position), pushing the DOWN (◀) switch shifts the tuning frequency indicated on the display downward automatically until a broadcast station is received; pushing the UP (▶) switch shifts the tuning frequency upward until a broadcast station is received.

**MANUAL tuning** – With the AUTO/MANUAL switch set to MANUAL (latched position), pushing the DOWN (◀) switch momentarily decreases the frequency by one step. If the DOWN (◀) switch is kept depressed, the frequency starts to decrease rapidly. When it reaches the lower limit of the frequency range, the frequency scanning stops. Pushing the UP (▶) switch performs the opposite operation.

### 20 TAPE SELECTOR switches (TAPE A, TAPE B/AUX)

To monitor a recording in progress or to playback a tape from a tape deck connected to the TAPE A jacks, press TAPE A switch.

To monitor a tape deck or other audio equipment connected to TAPE B jacks, press TAPE B/AUX switch. Depressing TAPE A and TAPE B/AUX switches simultaneously facilitates dubbing (tape copying) from the tape deck connected to the TAPE B jacks into the tape deck connected to the TAPE A.

### Note:

Be sure to set both TAPE switches to OUT position when not operating a tape deck.

### 21 INPUT SELECTOR switches (AM, FM, PHONO)

**AM** – Press the AM switch for AM reception; the frequency display indicates the AM frequency in kHz.

**FM** – Press the FM switch for FM reception; the frequency display indicates the FM frequency in MHz.

**PHONO** – Press the PHONO switch to play records.

\* When the PHONO switch is pressed, the indicator above the switch lights.

### On the rear panel

### FM DE-EMPHASIS switch

Before shipment this switch has been preset to the appropriate position for the expected delivery area.

An incorrect setting will adversely affect high frequency response, so check for a correct setting before putting the unit into operation.

Oceania and Europe..... 50  $\mu$ s  
U.S. military and other countries ..... 75  $\mu$ s

### CHANNEL SPACE switch

The CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the channel space setting is not matched to the area where the receiver is to be used; for instance, when you moved from area 1 to area 2 or vice versa, desired reception of FM/AM broadcasts is not expected. In this case, change the CHANNEL SPACE setting in accordance with the area corresponding to the table shown below.

Area	Channel Space Frq.
1 Hawaii, and Guam	<b>FM:</b> 100 kHz <b>AM:</b> 10 kHz
2 European countries Far East countries	<b>FM:</b> 50 kHz <b>AM:</b> 9 kHz

Channel Space Table

### Note:

- Units shipped to the U.S.A. and Canada are not equipped with an FM DE-EMPHASIS and CHANNEL SPACE switches on the rear panel.
- When changing the setting of the CHANNEL SPACE switch, turn the POWER switch OFF and ON.



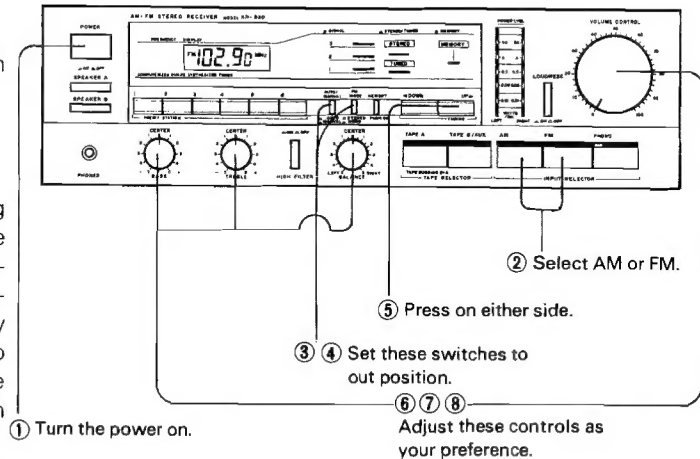
# Operating instructions

## Broadcasting reception

### Auto tuning (Almost all stations can be tuned in)

1. Press the POWER switch.
2. Press the AM switch for AM reception or the FM switch for FM reception.
3. Set the AUTO/MANUAL switch to AUTO (unlatched).
4. Set the FM MODE switch to STEREO (unlatched).  
The muting will act in FM mode.
5. Press the UP (▶) or DOWN (◀) switch to start the tuning system in the direction of the desired station. Release when the frequency display shows that you are approaching your station. The auto tuning will stop automatically when the station is received, and the frequency display will show the channel frequency. Note, if the auto tuning stops at an unwanted station before it reaches the desired station, press the UP (▶) or DOWN (◀) switch again.
6. Adjust the VOLUME CONTROL to the desired listening level.
7. Adjust the balance of the left and right channels.
8. Use the BASS and TREBLE control to adjust the sound to suit your own taste, as well as the acoustic conditions of the room.

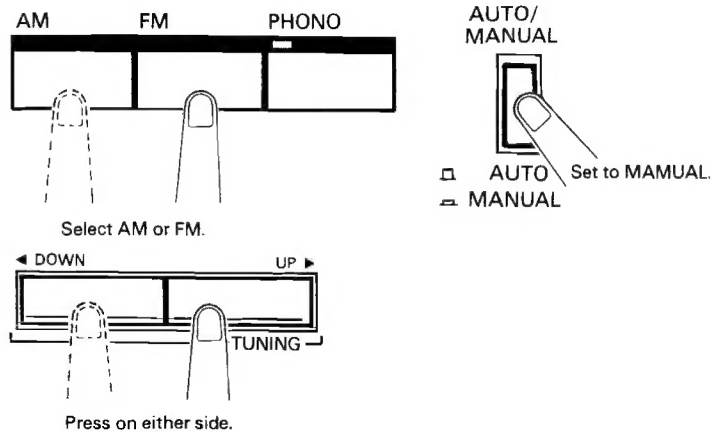
### Auto tuning



### Manual tuning (to receive a weak broadcast)

1. Press the AM switch for AM reception or the FM switch for FM reception.
2. Set the AUTO/MANUAL switch to MANUAL (latched).
3. To receive a weak broadcast, set the FM MODE switch to MONO. The muting will be released in FM mode.
4. Press the UP (▶) or DOWN (◀) switch to start the tuning system in the direction of the desired station. Release when the frequency display shows your station. If the tuning does not stop at your station, tap the UP (▶) or DOWN (◀) switch.
5. Adjust the VOLUME CONTROL to the desired listening level and use the BASS and TREBLE controls to adjust the sound to suit your own taste.

### Manual tuning



### Preset procedures

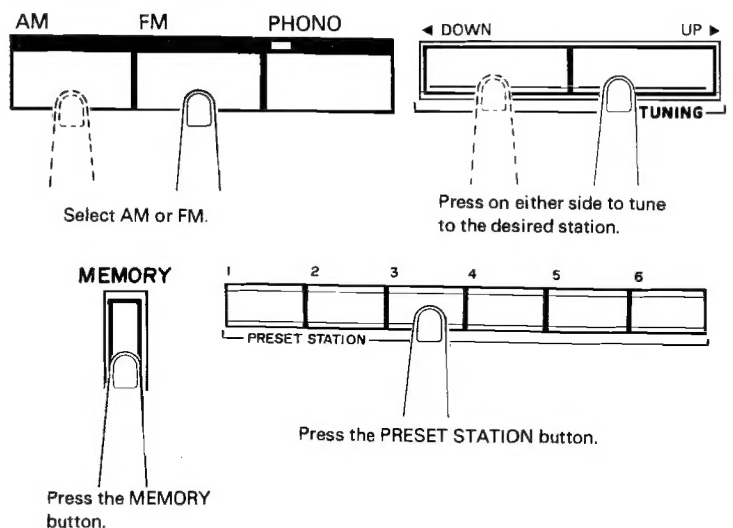
Up to 6 stations can be preset in both the AM and FM bands. The preset procedure is as shown below.

1. Press the AM switch for AM station presetting or FM switch for FM station presetting.
2. With the auto or manual tuning, tune the unit to the desired station.
3. Press the MEMORY button.
4. Press one of the PRESET STATION button within 5 seconds after the MEMORY button is pressed.

#### Note:

1. When a PRESET STATION button is pressed to preset a new frequency, the old frequency is cleared and the new frequency is stored.
2. A high performance battery unit is built in the unit. Therefore, the contents of the memory are not cleared when the power switch is turned OFF. This battery is a lithium type and will last about 10 years.
3. Do not press the MEMORY and PRESET STATION button simultaneously.

### Preset procedures





### Preset tuning

1. Press the AM or FM switch.
2. Press the PRESET STATION button for the desired station.
3. Adjust the VOLUME CONTROL to the desired listening level and use the BASS and TREBLE controls to adjust the sound to suit your own taste.

### Turntable

1. Press the PHONO switch.
2. Operate the turntable.
3. Adjust the VOLUME CONTROL to the desired listening level and use the BASS and TREBLE controls to adjust the sound to suit your own taste.

### Tape decks

#### Tape playback

1. Press the TAPE A or TAPE B/AUX switch to select output from tape deck connected to the TAPE A or TAPE B jacks.
2. Operate the tape deck.
3. Adjust the VOLUME CONTROL to desired listening level and use the BASS and TREBLE controls to adjust the sound to suit your own taste.

#### Tape monitoring

If your tape deck is equipped with three heads, you can compare the sound quality of the recording in progress with that of the source material by switching the appropriate TAPE SELECTOR switch while the recording is being made.

#### Recording (one tape deck)

1. Press the AM, FM or PHONO switch for the desired program source.
2. Set both TAPE SELECTOR switches to out position.  
To monitor the recording, press the appropriate TAPE SELECTOR switch depending on the set of jacks to which your tape deck is connected.
3. Set up your tape deck for recording and set the recording levels with the controls on your tape deck.  
The VOLUME CONTROL on the receiver do not affect the signal applied to the tape deck for recording purposes.
4. Adjust listening level and tone at the receiver for your preference in monitoring the signal; these settings will not affect the recording.

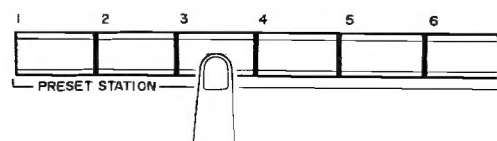
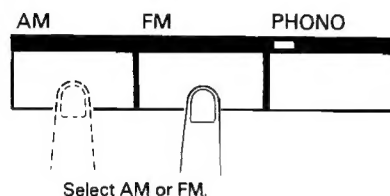
#### Recording (two tape decks)

1. Press the AM, FM or PHONO switch for the desired program source.
2. Set both TAPE SELECTOR switches to out position.
3. Set up your tape decks for recording and set recording levels with the controls on your tape decks.
4. Recordings can now be made on both tape decks simultaneously.  
To monitor these recordings, press the TAPE A switch.

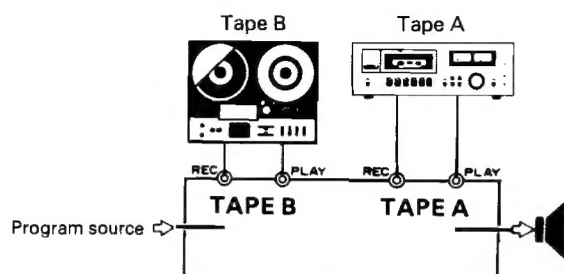
#### Tape-to-tape dubbing

Tape recordings may be duplicated easily using tape deck connected to TAPE B jacks to play the prerecorded tape and tape deck connected to TAPE A jacks to record the copy.

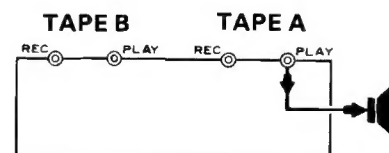
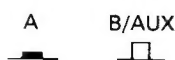
### Preset tuning



Press the PRESET STATION button.

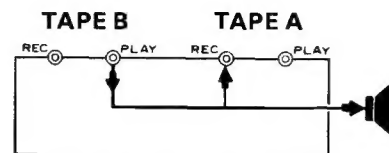
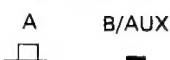


#### For playback (Tape deck A)



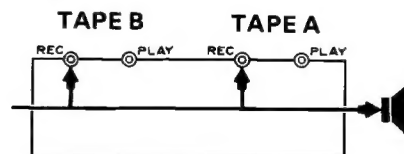
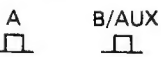
Playback signal is supplied to the TAPE A PLAY jacks, and is heard from the speakers.

#### For playback (Tape deck B)



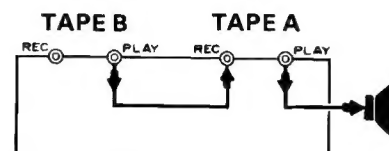
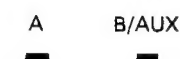
Playback signal is supplied to the TAPE B PLAY jacks, and is heard from the speakers.

#### For recording TAPE



The input signal selected by the INPUT SELECTOR switch is always present at a fixed level at the TAPE A and TAPE B REC jacks.

#### For dubbing



Switch as shown to record a copy on tape deck A from a tape played on tape deck B. The recording can be monitored.

## In case of difficulty

If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

<b>AM, FM, PHONO or tape playback</b>	<b>Cause</b>	<b>Remedy</b>
Power on but no sound.	<ol style="list-style-type: none"> <li>1. Power cord not plugged in.</li> <li>2. Poor connection at wall outlet. Power outlet inactive.</li> <li>3. VOLUME CONTROL set fully counterclockwise.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check plug contact.</li> <li>2. Check outlet using a lamp or other appliance (outlet may be controlled by a wall switch).</li> <li>3. Set the control to your preference.</li> </ol>
No sound from left and right.	<ol style="list-style-type: none"> <li>1. Speaker cords disconnected.</li> <li>2. Speakers switched off.</li> <li>3. No input selector switch is in use.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check speaker connections.</li> <li>2. Check speaker switch.</li> <li>3. Push one of the selector switches to select the desired program.</li> </ol>
Sound from left or right, but not both.	<ol style="list-style-type: none"> <li>1. Poor speaker connections.</li> <li>2. Defective speaker.</li> <li>3. BALANCE set to one extreme or the other.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check connections at both ends of speaker cord.</li> <li>2. Reverse speakers, if problem stays with speaker have speaker checked.</li> <li>3. Check setting of BALANCE control.</li> </ol>
<b>PHONO playback only</b>	<b>Cause</b>	<b>Remedy</b>
No sound from both or one speaker.	Turntable output disconnected.	Check phono cables.
Loud hum drowns out sound.	Poor ground connection at phono cable connections.	Check phono plugs, particularly outer-shell connections.
Low background hum.	Hum Picked up in turntable or turntable cables.	Keep cables away from power cords. Twist left and right cables together. Reverse AC plug of turntable. Connect ground wire between turntable and GND connector.
Background buzz.	TV signal picked up by phono cable (especially near transmitter).	Route phono cables to minimize buzz.
Howling noise at maximum volume settings.	Acoustic pickup from speaker.	Increase distance between speaker and turntable. Choose speaker locations carefully. Check turntable suspension.

# Specifications

## IHF

### Audio Section

#### Power Output

60 watts\* per channel minimum RMS, both channels driven at 8 ohms from 20 Hz to 20 kHz with no more than 0.03% total harmonic distortion.

#### Both Channels Driven

Into 8 ohms at 1 kHz ..... 63W + 63W

#### Dynamic Power Output

at 4 ohms ..... 200W

#### Total Harmonic Distortion (20 Hz to 20 kHz from TAPE)

Rated power into 8 ohms ..... 0.03%

1 watt power into 8 ohms ..... 0.03%

#### Intermodulation Distortion (60 Hz : 7 kHz = 4 : 1 SMPTE)

Rated power into 8 ohms ..... 0.02%

1 watt power into 8 ohms ..... 0.02%

#### Slew Rate

.....  $\pm 50V/\mu\text{sec}$

#### Rise Time

..... 2.0  $\mu\text{sec}$

#### Damping Factor

..... 40 at 1 kHz, 8 ohms

#### Input Sensitivity/Impedance

PHONO ..... 2.5 mV/50k ohms

TAPE, AUX ..... 150 mV/50k ohms

#### Signal to Noise Ratio (A weighted)

PHONO ..... 78 dB for 2.5mV input

..... 84 dB for 5.0 mV input

TUNER, AUX, TAPE PLAY ..... 103 dB for 150 mV input

#### Maximum PHONO Input Level

at 1,000 Hz ..... 200 mV (RMS), THD 0.03%

#### Frequency Response

##### PHONO RIAA Standard

Curve ..... 20 Hz to 20 kHz

.....  $\pm 0.3$  dB

TAPE, AUX ..... 10 Hz to 150 kHz

..... +0 dB, -3 dB

#### Tone Control

BASS .....  $\pm 8$  dB at 100 Hz

TREBLE .....  $\pm 8$  dB at 10 kHz

#### Filter

HIGH ..... 6 dB/oct at 5 kHz

#### Loudness Control

(VOL - 30 dB) ..... + 10 dB at 100 Hz

#### Output Level/Impedance

TAPE REC Out (Pin) ..... 150 mV/1k ohms

### FM Tuner Section

Usable Sensitivity ..... 10.8 dBf (1.9  $\mu\text{V}$ )

#### 50 dB Quieting Sensitivity

Mono ..... 14.8 dBf (3.0  $\mu\text{V}$ )

Stereo ..... 37.3 dBf (40  $\mu\text{V}$ )

#### NOTE:

We follow a policy of continuous advancements in development. For this reason specifications may be changed without notice.

#### Signal-to-Noise Ratio at 65 dBf

Mono ..... 78 dB

Stereo ..... 73 dB

#### Total Harmonic Distortion at 1 kHz

Mono ..... 0.08%

Stereo ..... 0.09%

#### Frequency Response

30 Hz to 15 kHz

+0.5 dB, -2.0 dB

#### Capture Ratio

1.0 dB

#### Image Rejection Ratio

45 dB

#### Spurious Response Ratio

78 dB

#### IF Response Ratio

95 dB

#### Alternate Channel Selectivity

52 dB at  $\pm 400$  kHz

#### AM Suppression Ratio

64 dB

#### Stereo Separation Ratio

48 dB at 1 kHz

35 dB at 50 Hz to 10 kHz

300 ohms balanced and

75 ohms unbalanced

#### FM Frequency Range

87.5 MHz to 108 MHz

### AM Tuner Section

Usable Sensitivity ..... 10  $\mu\text{V}$  (400  $\mu\text{V/m}$ )

Signal-to-Noise Ratio ..... 47 dB

Image Rejection ..... 40 dB

Selectivity ..... 25 dB

### General

Power Consumption ..... 2.6A (UL and CSA)

380W (IEC)

380W (Others)

33W (No Signal)

#### AC Outlet

Switched 1, Unswitched 1

#### Dimensions

W: 440 mm (17-21/64")

H: 133 mm (5-15/64")

D: 295 mm (11-39/64")

#### Weight (Net)

6.8 kg (15.0 lb)

#### (Gross)

7.7 kg (17.0 lb)

\* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.

# Specifications

## IEC

### Audio Section

<b>Rated Power Output</b>	
4 ohms at 60 Hz to 12.5 kHz	
no more than 0.7% T.H.D.(IEC)	65W + 65W
<b>Total Harmonic Distortion</b>	
Rated Power Output into 8 ohms	0.03%
1 watt power into 8 ohms	0.03%
<b>Intermodulation Distortion</b>	
Rated power into 8 ohms	0.02%
1 watt power into 8 ohms	0.02%
Slew Rate	$\pm 50 \text{ V}/\mu\text{sec}$
Rise Time	2.0 $\mu\text{sec}$
Frequency Response	10 Hz to 150 kHz
	+0 dB, -3 dB
<b>S/N Weighted: Rated Output Power (IEC-A)</b>	
( ) = Unweighted, at 50 mV (DIN)	
PHONO	78 dB (51 dB)
TUNER, AUX, TAPE PLAY	103 dB (55 dB)
Damping Factor at 8 ohms, 1 kHz	40
<b>Input Sensitivity/Impedance</b>	
PHONO	2.5 mV/50 k $\Omega$
TUNER, AUX, TAPE PLAY	150 mV/50 k $\Omega$
<b>Tone Control</b>	
Bass 100 Hz	$\pm 8 \text{ dB}$
Treble 10 kHz	$\pm 8 \text{ dB}$
<b>Filter</b>	
HIGH	6 dB/oct at 5 kHz
Loudness Control (-30 dB)	+10 dB at 100 Hz

### FM Tuner Section

<b>Sensitivity at 75 ohms</b>	
Mono: S/N 26 dB, 40 kHz Dev.	0.7 $\mu\text{V}$
Stereo: S/N 46 dB, 46 kHz Dev.	25 $\mu\text{V}$
<b>Limiting level</b>	
-3 dB Point, 40 kHz Dev.	0.8 $\mu\text{V}$
Frequency Response	30 Hz ~ 15 kHz
	+0.5 dB, -2.0 dB
<b>Total Harmonic Distortion</b>	
Mono: 1 kHz, 40 kHz Dev.	0.2%
Stereo: 1 kHz, 46 kHz Dev.	0.25%
<b>S/N Weighted (IEC-A)</b>	
Mono: 40 kHz Dev., 1 mV Input	73 dB
Stereo: 46 kHz Dev., 1 mV Input	63 dB
<b>S/N Ratio (IHF)</b>	
Mono: 75 kHz Dev., 1 mV Input	78 dB
Stereo: 75 kHz Dev., 1 mV Input	73 dB
<b>FM Stereo Separation: 1 mV Input (DIN)</b>	
250 Hz	38 dB
1 kHz	40 dB
6.3 kHz	32 dB
Image Rejection Ratio	45 dB
IF Rejection Ratio	95 dB
AM Suppression Ratio	64 dB
Spurious Rejection Ratio	78 dB
Capture Ratio	2.0 dB

### AM Tuner Section

Sensitivity S/N 20 dB	10 $\mu\text{V}$
S/N Ratio: 1 mV Input	47 dB
Image Rejection Ratio	40 dB

### General

<b>Power Consumption</b>	
IEC	380W
No signal	33W
<b>Dimensions</b>	
	W: 440 mm
	H: 133 mm
	D: 295 mm
Weight (net)	6.8 kg

#### NOTE:

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# KENWOOD